

<400> 4

# 072396.0263 Supplemental Seqlist.txt

**SEQUENCE LISTING** <110> Robbins, Paul D. Mai, Jeffrey C. <120> A COMPACT SYNTHETIC EXPRESSION VECTOR COMPRISING DOUBLE-STRANDED DNA MOLECULES AND METHODS OF USE THEREOF <130> AP35518 (072396.0263) <140> 10/807,755 <141> 2004-03-24 <150> 60/456,989 <151> 2003-03-24 <160> 52 <170> FastSEQ for Windows Version 4.0 <210> 1 <211> 51 <212> DNA <213> Artificial Sequence <220> <223> synthetic oligonucleotide gcaagcugac ccugaaguuc uucaagagag aacuucaggg ucagcuugcu u 51 <210> 2 <211> 22 <212> DNA <213> Artificial Sequence <220> <223> synthetic oligonucleotide gcaagcugac ccugaaguuc uu 22 <210> 3 <211> 22 <212> DNA <213> Artificial Sequence <223> synthetic oligonucleotide <400> 3 gaacuucagg gucagcuugc uu 22 <210> 4 <211> 156 <212> DNA <213> Artificial Sequence <223> synthetic oligonucleotide

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072396.0263 Supplemental Seqlist.txt
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ttgggaatct tataagttct gtatgagacc acagatcccc gcaagctgac cctgaagttc 120 ttcaagagag aacttcaggg tcagcttgct ttttgg 156
<210> 5
<211> 12
<212> DNA
<213> Artificial Sequence
<220>
<223> synthetic oligonucleotide
<400> 5
gtggcgcagc gg
                                                                       12
<210> 6
<211> 11
<212> DNA
<213> Artificial Sequence
<220>
<223> synthetic oligonucleotide
<400> 6
ggatcgaaac c
                                                                       11
<210> 7
<211> 28
<212> DNA
<213> Artificial Sequence
<223> synthetic oligonucleotide
<400> 7
ttttttata tatacaggag gccgaggc
                                                                       28
<210> 8
<211> 16
<212> PRT
<213> Artificial Sequence
<220>
<223> synthetic polypeptide
<400> 8
Cys Gly Ser Asp Ala Leu Asp Asp Phe Asp Leu Asp Met Leu Gly Ser
<210> 9
<211> 29
<212> PRT
<213> Artificial Sequence
<223> synthetic polypeptide
<400> 9
Cys Gly Ser Asp Ala Leu Asp Asp Phe Asp Leu Asp Met Leu Gly Ser
                                       10
Asp Ala Leu Asp Asp Phe Asp Leu Asp Met Leu Gly Ser
                                          Page 2
```

### 072396.0263 Supplemental Seglist.txt

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<210> 10
<211> 15
<212> DNA
<213> Artificial Sequence
<220>
<223> synthetic oligonucleotide
aggtcagcat gacct
                                                                      15
<210> 11
<211> 15
<212> DNA
<213> Artificial Sequence
<220>
<223> synthetic oligonucleotide
<400> 11
aggtcatatt gacct
                                                                      15
<210> 12
<211> 20
<212> DNA
<213> Artificial Sequence
<223> synthetic oligonucleotide
<400> 12
gtgcttgctt tggtagcaca
                                                                      20
<210> 13
<211> 14
<212> DNA
<213> Artificial Sequence
<223> synthetic oligonucleotide
<400> 13
aagattagca cagt
                                                                      14
<210> 14
<211> 62
<212> DNA
<213> Artificial Sequence
<223> synthetic oligonucleotide
<400> 14
gaatcttata agttctgtat gagaccacag atccccgtgc ttgctttggt agcacaagca 60
<210> 15
<211> 59
<212> DNA
<213> Artificial Sequence
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072396.0263 Supplemental Seqlist.txt
<223> synthetic oligonucleotide
<400> 15
tttttcgata acatcttcga ccacctgaca cgattagaag gtggtcggag atgttgtcg 59
<210> 16
<211> 82
<212> DNA
<213> Artificial Sequence
<220>
<223> synthetic oligonucleotide
<400> 16
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ccaccagcuu cuacaauagc uu
<210> 17
<211> 22
<212> DNA
<213> Artificial Sequence
<223> synthetic oligonucleotide
<400> 17
gcuguuguag aggcuggugg aa
                                                                        22
<210> 18
<211> 22
<212> DNA
<213> Artificial Sequence
<223> synthetic oligonucleotide
<400> 18
ccaccagcuu cuacaauagc uu
                                                                        22
<210> 19
<211> 36
<212> DNA
<213> Artificial Sequence
<220>
<223> synthetic oligonucleotide
<400> 19
cctcaaatgg tctccaattt tcctttggca aattcc
                                                                        36
<210> 20
<211> 100
<212> DNA
<213> Artificial Sequence
<220>
<223> synthetic oligonucleotide
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                                                                        100
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072396.0263 Supplemental Seqlist.txt
<210> 21
<211> 100
<212> DNA
<213> Artificial Sequence
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<223> synthetic oligonucleotide
<400> 21
aatatttgca tgtcgctatg tgttctggga aatcaccata aacgtgaaat gtctttggat 60
ttgggaatct tataagttct gtatgagacc actctttccc
<210> 22
<211> 68
<212> DNA
<213> Artificial Sequence
<220>
<223> synthetic oligonucleotide
<400> 22
tcaccataaa cgtgaaatgt ctttggattt gggaatctta taagttctgt atgagaccac 60
tctttccc
<210> 23
<211> 135
<212> DNA
<213> Artificial Sequence
<220>
<221> misc_feature
<222> (71)...(89)
<223> n = A,T,C or G
<221> misc_feature
<222> (93)...(111)
<223> n = A,T,C or G
<223> synthetic oligonucleotide
<400> 23
caggactagt cttttaggtc aaaaagaaga agctttgtaa ccgttggaaa acgtagtgta 60
gtggttacac nnnnnnnnnn nnnnnnnnna tgnnnnnnnn nnnnnnnnn nttcggttcg 120
aaaccgggcg ttttt
                                                                       135
<210> 24
<211> 190
<212> DNA
<213> Artificial Sequence
<220>
<221> misc_feature
<222> (75)...(93)
<223> n = A,T,C or G
<221> misc_feature
<222> (97)...(115)
<223> n = A,T,C or G
<223> synthetic oligonucleotide
aattcaggac tagtctttta ggtcaaaaag aagaagcttt gtaaccgttg gaaaacgtag 60
                                          Page 5
```

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072396.0263 Supplemental Seglist.txt
tgtagtggtt acacnnnnnn nnnnnnnnnn nnnatgnnnn nnnnnnnnnn nnnnnttcgg 120
ttcgaaaccg ggcgttttta aagagagtcg cttttttttc tatcgctaat tctgtttttg 180
agtattttca
<210> 25
<211> 135
<212> DNA
<213> Artificial Sequence
<220>
<221> misc_feature
<222> (71)...(89)
<223> n = A,T,C or G
<221> misc_feature
<222> (101)...(119)
<223> n = A,T,C or G
<223> synthetic oligonucleotide
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tgtagtggtt nnnnnnnnn nnnnnnnng ttcgactctg nnnnnnnnn nnnnnnnnnt 120
ttttctatcg ctaat
                                                                           135
<210> 26
<211> 155
<212> DNA
<213> Artificial Sequence
<220>
<221> misc_feature
<222> (71)...(89)
<223> n = A,T,C or G
<221> misc_feature <222> (101)...(119)
<223> n = A,T,C or G
<223> synthetic oligonucleotide
<400> 26
aattcaggac tagtctttta ggtcaaaaag aagaagcttt gtaaccgttg gtttccgtag 60 tgtagtggtt nnnnnnnnn nnnnnnnnn ttcgactctg nnnnnnnnn nnnnnnnn 120 ttttctatcg ctaattctgt ttttgagtat tttca
<210> 27
<211> 135
<212> DNA
<213> Artificial Sequence
<220>
<221> misc_feature
<222> (66)...(84)
<223> n = A,T,C or G
<221> misc_feature
<222> (95)...(113)
<223> n = A,T,C or G
<223> synthetic oligonucleotide
<400> 27
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072396.0263 Supplemental Seqlist.txt
caggactagt cttttaggtc aaaaagaaga agctttgtaa ccgttggttt ccgtagtgta 60
gtágtnnnin nnnnnninnn nnnncitcct gicanninnn nninnninnn nnnttitigg 120
ttcgaaaccg ggcgg
<210> 28
<211> 194
<212> DNA
<213> Artificial Sequence
<220>
<221> misc_feature
<222> (70)...(88)
<223> n = A,T,C or G
<221> misc_feature
<222> (99)...(117)
<223> n = A,T,C or G
<223> synthetic oligonucleotide
<400> 28
aattcaggac tagtctttta ggtcaaaaag aagaagcttt gtaaccgttg gtttccgtag 60
tgtagtggtn nnnnnnnnn nnnnnnnct tcctgtcann nnnnnnnnn nnnnnnnttt 120
ttggttcgaa accgggcgga aacaaagaga gtcgcttttt tttctatcgc taattctgtt 180
tttgagtatt ttca
                                                                     194
<210> 29
<211> 135
<212> DNA
<213> Artificial Sequence
<220>
<221> misc_feature
<222> (79)...(97)
<223> n = A,T,C or G
<221> misc_feature <222> (112)...(130)
\langle 223 \rangle n = A,T,C or G
<223> synthetic oligonucleotide
<400> 29
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ttggtagcac atgtacttnn nnnnnnnnn nnnnnnnaag atagcacagt annnnnnn 120
nnnnnnnn tttt
<210> 30
<211> 150
<212> DNA
<213> Artificial Sequence
<220>
<221> misc_feature
<222> (94)...(112)
<223> n = A,T,C or G
<221> misc_feature
<222> (127)...(145)
<223> n = A,T,C or G
<223> synthetic oligonucleotide
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072396.0263 Supplemental Seglist.txt
<400> 30
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aacaccgtgc ttgctttggt agcacatgta cttnnnnnn nnnnnnnnn nnaagatagc 120
acagtannnn nnnnnnnnn nnnnnttttt
                                                                      150
<210> 31
<211> 135
<212> DNA
<213> Artificial Sequence
<220>
<221> misc_feature
<222> (86)...(104)
<223> n = A,T,C or G
<221> misc_feature
<222> (115)...(133)
<223> n = A,T,C or G
<223> synthetic oligonucleotide
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gtgggggcgc gttcgtcctc actctnnnnn nnnnnnnnnn nnnncttcct gtcannnnn 120
nnnnnnnnn nnntt
<210> 32
<211> 158
<212> DNA
<213> Artificial Sequence
<220>
<221> misc_feature
<222> (106)...(124)
<223> n = A,T,C or G
<221> misc_feature
<222> (135)...(153)
<223> n = A,T,C or G
<223> synthetic oligonucleotide
<400> 32
cttcggcatc aaggaaggtg attggtttat aggtgtaggc cacgtgaccg ggtgttcctg 60
aaggggggct ataaaagggg gtgggggcgc gttcgtcctc actctnnnnn nnnnnnnnnn 120 nnnncttcct gtcannnnnn nnnnnnnnnn nnnttttt 158
<210> 33
<211> 135
<212> DNA
<213> Artificial Sequence
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<221> misc_feature
<222> (83)...(101)
<223> n = A,T,C or G
<221> misc_feature
<222> (112)...(130)
<223> n = A,T,C or G
<223> synthetic oligonucleotide
```

## 072396.0263 Supplemental Seglist.txt <400> 33 ctcatgcttg gctggcagcc atccagtttt agccagctcc tccctacctt ccctttttt 60 tatatataca ggaggccgag gcnnnnnnn nnnnnnnnn ncttcctgtc annnnnnnn 120 nnnnnnnnn tttt <210> 34 <211> 153 <212> DNA <213> Artificial Sequence <221> misc\_feature <222> (101)...(119) <223> n = A,T,C or G<221> misc\_feature <222> (130)...(148) $\langle 223 \rangle$ n = A,T,C or G <223> synthetic oligonucleotide <400> 34 tggctcccta ggtatgagct catgcttggc tggcagccat ccagttttag ccagctcctc 60 cctaccttcc cttttttta tatatacagg aggccgaggc nnnnnnnnn nnnnnnnnc 120 ttcctgtcan nnnnnnnnn nnnnnnnntt ttt 153 <210> 35 <211> 130 <212> DNA <213> Artificial Sequence <223> synthetic oligonucleotide <400> 35 ttcaggacta gtcttttagg tcaaaaagaa gaagctttgt aaccgttggt ttccgtagtg 60 tagtőgttga atggcgtcaa ggtggacőtt cgačtctgőt tcacčttőat gccgftcítt 120 ttctatcgct <210> 36 <211> 11 <212> DNA <213> Artificial Sequence <223> synthetic oligonucleotide <400> 36 11 tagtgtagtg g <210> 37 <211> 9 <212> DNA <213> Artificial Sequence <223> synthetic oligonucleotide <400> 37 9 gttcgactc <210> 38 <211> 55

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072396.0263 Supplemental Seqlist.txt
<212> DNA
<213> Artificial Sequence
<220>
<223> synthetic oligonucleotide
ttcaggacta gtcttttagg tcaaaaagaa gaagctttgt aaccgttggt ttccg
                                                                      55
<210> 39
<211> 8
<212> DNA
<213> Artificial Sequence
<223> synthetic oligonucleotide
<400> 39
ctatcgct
                                                                      8
<210> 40
<211> 82
<212> DNA
<213> Artificial Sequence
<223> synthetic oligonucleotide
<400> 40
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<210> 41
<211> 129
<212> DNA
<213> Artificial Sequence
<220>
<223> synthetic oligonucleotide
tcgatttctt ggctttatat atcttgtgga aaggacgaaa caccgtgctt gctttggtag 60
cacactgatt gcaggctgat cctgaggttc aagatagcac agtagaactt cagggtcagc 120
ttgcttttt
                                                                      129
<210> 42
<211> 20
<212> DNA
<213> Artificial Sequence
<220>
<223> synthetic oligonucleotide
<400> 42
gtgcttgctt tggtagcaca
                                                                      20
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<211> 13
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<213> Artificial Sequence
<223> synthetic oligonucleotide
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## 072396.0263 Supplemental Seglist.txt

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<400> 43
                                                                    13
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<210> 44
<211> 44
<212> DNA
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<223> synthetic oligonucleotide
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                                                                    44
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<211> 6
<212> DNA
<213> Artificial Sequence
<220>
<223> synthetic oligonucleotide
<400> 45
                                                                    6
ctgatt
<210> 46
<211> 85
<212> DNA
<213> Artificial Sequence
<223> synthetic oligonucleotide
<400> 46
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gaacttcagg gtcagcttgc ttttt
<210> 47
<211> 165
<212> DNA
<213> Artificial Sequence
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<221> misc_feature
<222> (106)...(124)
<223> n = A,T,C or G
<221> misc_feature
<222> (135)...(153)
<223> n = A,T,C or G
<223> synthetic oligonucleotide
<400> 47
cgggatccat ttgcatgtcg ctatgtgttc tgggaaatca ccataaacgt gaaatgtctt 60
tǧǧātttggg aatcttātaā gttctgtatg aǧāccactct ttcccnnnnn nnnnnnnnnn 120
nnnncttcct gtcannnnn nnnnnnnnn nnntttttga attcc
                                                                    165
<210> 48
<211> 350
<212> DNA
<213> Artificial Sequence
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### 072396.0263 Supplemental Seglist.txt

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<220>
<221> misc_feature <222> (298)...(317)
<223> n = A,T,C or G
<221> misc_feature
<222> (327)...(345)
<223> n = A,T,C or G
<223> synthetic oligonucleotide
<400> 48
cccgtataca gacttgagag gcctgtcctc gagcggtgtt ccgcggtcct cctcgtatag 60
aaactcggac cactctgaga cgaaggctcg cgtccaggcc agcacgaagg aggctaagtg 120
ggaggggtag cggtcgttgt ccactagggg gtccactcgc tccagggtgt gaagacacat 180 gtcgccctct tcggcatcaa ggaaggtgat tggtttatag gtgtaggcca cgtgaccggg 240 tgttcctgaa ggggggctat aaaagggggt gggggcggt tcgtcctcac tctcttcnnn 300
nnnnnnnnn nnnnnncttc ctgtcannnn nnnnnnnnn nnnnnttttt
<210> 49
<211> 153
<212> DNA
<213> Artificial Sequence
<220>
<221> misc_feature
<222> (101)...(119)
<223> n = A,T,C or G
<221> misc_feature
<222> (130)...(148)
<223> n = A,T,C or G
<223> synthetic oligonucleotide
<400> 49
tggctcccta ggtatgagct catgcttggc tggcagccat ccagttttag ccagctcctc 60
cctaccttcc cttttttta tatatacagg aggccgaggc nnnnnnnnnn nnnnnnnnc 120
ttcctgtcan nnnnnnnnn nnnnnnnntt ttt
                                                                            153
<210> 50
<211> 121
<212> DNA
<213> Artificial Sequence
<220>
<221> misc_feature
<222> (98)...(116)
<223> n = A,T,C or G
<223> synthetic oligonucleotide
<400> 50
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ggaatettät aagttetgta tgagaeeact ettteeennn nnnnnnnnn nnnnnntttt 120
<210> 51
<211> 74
<212> RNA
<213> Artificial Sequence
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072396.0263 Supplemental Seglist.txt
<220>
<221> misc_feature
<222> 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35,
36, 37, 38, 39, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60,
61, 62, 63, 64, 65, 66, 67, 68, 69
<223> n = A,U,C or G
<223> Synthetic oligonucleotide
<400> 51
guuuccguag uguagugguu nnnnnnnnn nnnnnnnng uucgacucug nnnnnnnnn 60
nnnnnnnnu uuuu
<210> 52
<211> 83
<212> RNA
<213> Artificial Sequence
<220>
<221> misc_feature
<222> 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41,
42, 43, 44, 45, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69,
70, 71, 72, 73, 74, 75, 76, 77, 78
<223> n = A,U,C or G
<223> Synthetic oligonucleotide
<400> 52
gugcuugcuu ugguagcaca cugauunnnn nnnnnnnnn nnnnnaagau agcacaguan 60
nnnnnnnnn nnnnnnnuu uuu
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